CLAIMS

The invention claimed is:

1. A device for use with a voice gateway coupled in a network adapted to transmit network packets that meet a minimum protocol, comprising:

a WB telephone adapted to convert sound into sound signals that capture a bandwidth of the sound that includes a range of 200 Hz to 5 kHz;

an encoder coupled to receive the sound signals and to encode them as voice data bits;

a packetizer for packetizing groups of the voice data bits into intermediate packets which do not meet the minimum protocol; and

a modem adapted to establish a first circuit switched connection with the voice gateway, and coupled to transmit the intermediate packets through the first connection.

2. The device of claim 1, further comprising:

a decoder coupled to receive other voice data bits through the connection and the modem.

3. The device of claim 1, wherein

the modem is a DSVD modem.

4. The device of claim 1, wherein

the first connection has a rated capacity of 28.8 kbps.

5. The device of claim 1, wherein

the bandwidth includes a range of 150 Hz to 7.1 kHz.

6. The device of claim 1, wherein

the encoder encodes at a rate of at least 16 kbps.

7. A device comprising:

means for establishing a first circuit switched telephone connection with a first device at a first endpoint of a network capable of transmitting network data packets which meet a minimum protocol;

means for converting sound into sound signals;

means for encoding the sound signals into voice data bits at a rate of at least 16 kbps;

means for packetizing groups of the voice data bits into intermediate packets which do not meet the minimum protocol; and

means for transmitting the intermediate packets through the first connection.

8. The device of claim 7, further comprising:

means for multiplexing additional data with the voice data bits prior to transmitting.

9. The device of claim 7, further comprising:

means for receiving through the first connection return intermediate packets;

means for depacketizing the return intermediate packets to derive return voice data bits;

means for decoding the return voice data bits to produce return sound signals; and

means for producing a return sound from the return sound signals.

10. The device of claim 7, wherein

the first connection has a rated capacity of 28.8 kbps.

11. A gateway comprising:

a network interface for coupling to a network; and

a processor coupled with the network interface, wherein the processor is adapted to establish a first circuit switched telephone connection with a modem;

establish a second packet switched network connection through a network with a device at an endpoint of the network;

receive through the first connection a stream of intermediate packets that include voice data bits which represent sound that has been encoded at a rate of at least 16 kbps;

add packet headers to the intermediate packets to form network packets; and

transmit the network packets through the second connection.

12. The gateway of claim 11, wherein the processor is further adapted to

receive first dialing information,

wherein the first dialing information is used to establish the second connection.

13. The gateway of claim 11, wherein

the packet headers include at least one of IP type headers, UDP type headers and RTP type headers.

14. The gateway of claim 11, wherein

the first connection supports a data transmission at a rate not exceeding 28.8 kbps.

15. The gateway of claim 11, wherein

the stream includes non-voice data bits,

and the processor is further adapted to:

demultiplex the voice data bits from the non-voice data bits in the stream prior to adding the headers.

16. An adapter for an analog wideband telephone to communicate with a voice gateway coupled in a network adapted to transmit network packets that meet a minimum protocol, the adapter comprising:

an analog to digital converter for digitizing voice signals received from the analog wideband telephone;

an encoder coupled to receive the digitized voice signals and to encode them as voice data bits;

a packetizer for packetizing groups of the voice data bits into intermediate packets which do not meet the minimum protocol; and

a modem adapted to establish a first circuit switched connection with the voice gateway, and adapted to be coupled to transmit the intermediate packets through the first connection.

17. The adapter of claim 16, further comprising:

a depacketizer for depacketizing return intermediate packets which do not meet the minimum protocol to produce return voice data bits;

a decoder for decoding the return voice data bits to produce a digital return voice signal; and

a digital to analog converter for converting the digital return voice signal into an analog signal for the analog wideband telephone.

18. A gateway comprising:

a network interface for coupling to a network; and

a processor coupled with the network interface, wherein the processor is adapted to

establish a first packet switched network connection through a network with a device at an endpoint of the network;

establish a second circuit switched telephone connection with a modem;

receive through the first connection a stream of network packets that transport voice data bits that represent sound which has been encoded at a rate of at least 16 kbps;

strip packet headers from the network packets to yield intermediate packets; and

transmit the yielded intermediate packets through the second connection.

19. The gateway of claim 18, wherein the processor is further adapted to:

receive second dialing information,

wherein the second dialing information is used to establish the second connection.

20. The gateway of claim 18, wherein

the packet headers include at least one of IP type headers, UDP type headers and RTP type headers.

21. The gateway of claim 18, wherein

the first connection supports a data transmission at a rate not exceeding 28.8 kbps.

22. A device comprising:

means for establishing a first packet switched network connection through a network with a device at an endpoint of the network;

means for establishing a second circuit switched telephone connection with a modem;

means for receiving through the first connection a stream of network packets that transport voice data bits that represent sound which has been encoded at a rate of at least 16 kbps;

means for stripping packet headers from the network packets to yield intermediate packets; and

means for transmitting the yielded intermediate packets through the second connection.

23. The device of claim 22, further comprising:

means for receiving second dialing information,

wherein the second dialing information is used by the means for establishing the second connection.

24. The device of claim 22, wherein

the packet headers include at least one of IP type headers, UDP type headers and RTP type headers.

25. The device of claim 22, wherein

the first connection supports a data transmission at a rate not exceeding 28.8 kbps.

26. A device comprising:

means for establishing a circuit switched connection with a voice gateway coupled in a network which is adapted to transmit network packets that meet a minimum protocol;

means for receiving voice signals from an analog wideband telephone, the voice signals encoding sound in a range of at least 200 Hz to 5 kHz;

means for digitizing the received voice signals;

means for encoding the digitized voice signals as voice data bits at a rate of at least 16 kbps;

means for packetizing groups of the voice data bits into intermediate packets which do not meet the minimum protocol; and

means for transmitting the intermediate packets through the circuit switched connection.

27. The device of claim 26, further comprising:

means for depacketizing return intermediate packets which do not meet the minimum protocol to produce return voice data bits;

means for decoding the return voice data bits to produce a digital return voice signal; and

means for converting the digital return voice signal into an analog signal.

28. An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:

establishing a first circuit switched telephone connection with a modem;

establishing a second packet switched network connection through a network with a device at an endpoint of the network;

receiving through the first connection a stream of intermediate packets that include voice data bits which represent sound that has been encoded at a rate of at least 16 kbps;

adding packet headers to the intermediate packets to form network packets; and

transmitting the network packets through the second connection.

29. The article of claim 28, wherein executing the instructions further results in:

receiving first dialing information,

wherein the first dialing information is used to establish the second connection.

30. The article of claim 29, wherein

the packet headers include at least one of IP type headers, UDP type headers and RTP type headers.

31. The article of claim 30, wherein

the first connection supports a data transmission at a rate not exceeding 28.8 kbps.

30. The article of claim 32, wherein

the stream includes non-voice data bits,

and the instructions further result in:

demultiplexing the voice data bits from the non-voice data bits in the stream prior to adding the headers.

31. An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:

establishing a first packet switched network connection through a network with a device at an endpoint of the network;

establishing a second circuit switched telephone connection with a modem;

receiving through the first connection a stream of network packets that transport voice data bits that represent sound which has been encoded at a rate of at least 16 kbps;

stripping packet headers from the network packets to yield intermediate packets; and

transmitting the yielded intermediate packets through the second connection.

32. The article of claim 31, wherein executing the instructions further results in:

receiving second dialing information,

wherein the second dialing information is used to establish the second connection.

33. The article of claim 31, wherein

the packet headers include at least one of PPP type headers, IP type headers, UDP type headers and RTP type headers.

34. A method comprising:

establishing a first circuit switched telephone connection with a first device at a first endpoint of a network capable of transmitting data packets which meet a minimum protocol;

converting sound into sound signals;

encoding the sound signals into voice data bits at a rate of at least 16 kbps;

packetizing groups of the voice data bits into intermediate packets which do not meet the minimum protocol; and

transmitting the intermediate packets through the first connection.

35. The method of claim 34, wherein

the first connection supports a data transmission at a rate not exceeding 28.8 kbps.

36. The method of claim 34, further comprising:

multiplexing additional data with the voice data bits prior to transmitting.

37. The method of claim 34, wherein

the bandwidth includes a range of 150 Hz to 7.1 kHz.

38. The method of claim 34, further comprising:

receiving through the first connection return intermediate packets;

depacketizing the return intermediate packets to derive return voice data bits;

decoding the return voice data bits to produce return sound signals; and

inputting the return sound signals into a speaker to produce a return sound in a second bandwidth that includes a range of 1 kHz to 5 kHz.

39. A method comprising:

establishing a first circuit switched telephone connection with a modem;

establishing a second packet switched network connection through a network with a device at an endpoint of the network;

receiving through the first connection a stream of intermediate packets that include voice data bits which represent sound that has been encoded at a rate of at least 16 kbps;

adding packet headers to the intermediate packets to form network packets; and

transmitting the network packets through the second connection.

40. The method of claim 39, further comprising:

receiving first dialing information,

wherein the first dialing information is used to establish the second connection.

41. The method of claim 39, wherein

the packet headers include at least one of IP type headers, UDP type headers and RTP type headers.

42. The method of claim 39, wherein

the first connection supports a data transmission at a rate not exceeding 28.8 kbps.

43. The method of claim 39, wherein

the stream includes non-voice data bits,

and further comprising:

demultiplexing the voice data bits from the non-voice data bits in the stream prior to adding the headers.

44. A method comprising:

establishing a first packet switched network connection through a network with a device at an endpoint of the network;

establishing a second circuit switched telephone connection with a modem;

receiving through the first connection a stream of packets that transport voice data bits that represent sound which has been encoded at a rate of at least 16 kbps;

stripping packet headers from the network packets to yield intermediate packets; and

transmitting the intermediate packets through the second connection.

45. The method of claim 44, further comprising:

receiving second dialing information regarding the modem,

wherein the second dialing information is used to establish the second connection.

46. The method of claim 44, wherein

the packet headers include at least one of IP type headers, UDP type headers and RTP type headers.

47. The method of claim 44, wherein

the second connection supports a data transmission at a rate not exceeding 28.8 kbps.

48. A method comprising:

establishing a circuit switched connection with a voice gateway coupled in a network which is adapted to transmit network packets that meet a minimum protocol;

receiving voice signals from an analog wideband telephone, the voice signals encoding sound in a range of at least 200 Hz to 5 kHz;

digitizing the received voice signals;

encoding the digitized voice signals as voice data bits at a rate of at least 16 kbps;

packetizing groups of the voice data bits into intermediate packets which do not meet the minimum protocol; and

transmitting the intermediate packets through the circuit switched connection.

49. The method of claim 48, further comprising:

depacketizing return intermediate packets which do not meet the minimum protocol to produce return voice data bits;

decoding the return voice data bits to produce a digital return voice signal; and

converting the digital return voice signal into an analog signal.